

**TRANSFECTION, STORAGE AND TRANSFER OF MALE GERM CELLS FOR  
GENERATION OF TRANSGENIC SPECIES & GENETIC THERAPIES**

**ABSTRACT OF THE DISCLOSURE**

5 A composition for in vivo transfection of vertebrate male germ cells comprises a  
nucleic acid or transgene, and a gene delivery system, and optionally a protective  
internalizing agent, such as an endosomal lytic agent, a virus or a viral component, which is  
internalized by cells along with the transgene and which enhances gene transfer through the  
cytoplasm to the nucleus of the male germ cell. A pharmaceutical preparation and a transfer  
kit utilize the composition. A method for introducing a polynucleotide into vertebrate male  
10 germ cells comprises the administration of the composition to a vertebrate. A method for  
isolating or selecting transfected cells utilizes a reporter gene, and a method for  
administering transfected male germ cells utilizes male germ cells which have been  
transfected in vitro.